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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/652,005

08/29/2003

Darwin Mitchel Hanks

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EXAMINER

GOMA, TAWFIK A

ART UNIT

PAPER NUMBER

2627

MAIL DATE

DELIVERY MODE

09/21/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/652,005

Applicant(s)

HANKS, DARWIN MITCHEL

Examiner

Tawfik Goma

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 9-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This action is in response to the RCE filed on 7/01/2007.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lehureau et al (4025784) in view of Tanaka et al (US 6608809)

Regarding claim 1, Lehureau '784 discloses a method of focus control, comprising: passing a light source beam over a reflectivity change of a storage media and on to a leading photo sensor (5, fig. 3 and fig. 10) and a trailing photo sensor (4, fig. 3 and fig. 10); determining whether the leading photo sensor or the trailing photo sensor had a first change in reflectivity (figs. 4 and 5); if the leading sensor experienced the first change in reflectivity, then adjusting a focus actuator to move a focus lens farther from the storage media (fig. 5 and col. 3 lines 25-32); and if the trailing sensor experienced the first change in reflectivity, then adjusting the focus actuator to move the focus lens closer to the storage media (fig. 4 and col. 3 lines 16-24). Lehureau discloses that the reflectivity change is from an area of more reflectivity to an area of less reflectivity but fails to disclose wherein the reflectivity change is from reflective to non-reflective areas. In the same field of endeavor, Tanaka discloses a method of detecting marks on a disc wherein the disc has a reflectivity change from reflective to non-reflective (Boundary area, fig. 3 and col. 5 lines 41-45). It would have been obvious to one of ordinary skill in the art to

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modify the method disclosed by Lehureau by providing a disc with reflective and non-reflective areas as taught by Tanaka. The rationale is as follows: It would have been obvious to provide for non-reflective instead of the less-reflective areas of Lehureau as it would have been a simple substitution of one known element for another to obtain predictable results.

Regarding claim 2, Lehureau '784 discloses a method further comprising: if the trailing sensor and the leading sensor experienced a change in reflectivity at substantially the same time, then leaving the focus lens in a current location (figs. 1 and 6 and col. 1 lines 16-22).

Claims 3-4 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lehureau et al (US 4025784) in view of Tanaka et al (US 6608809) as applied to claims 1 and 2 above and further in view of Lehureau (US 2004/0027964).

Regarding claim 3, Lehureau '784 fails to disclose wherein the storage media is selected from the group consisting of compact discs and digital versatile discs. In the same field of endeavor, Lehureau '964 discloses a similar focusing device used for a CD (pars. 4 and 9). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the device disclosed by Lehureau '784 by using it with a CD or DVD as taught by Lehureau '964. The rationale is as follows: One of ordinary skill in the art would have been motivated to use the focusing device for a CD or DVD in order to use a disc with greater storage capacity (see '964, par. 2)

Regarding claim 4, Lehureau '964 further discloses wherein the storage media is a removable storage media (pars. 4 and 9).

Regarding claims 6-8, Lehureau '784 fails to disclose wherein: the leading photo sensor comprises a first pair of photo sensors from a quadrature photo sensor; and the trailing photo

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sensor comprises a second pair of photo sensors from the quadrature photo sensor. In the same field of endeavor, Lehureau '784 discloses a quadrature photodetector for focusing, wherein a first pair and a second pair are leading and lagging detectors (fig. 12 and par. 61). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the device disclosed by Lehureau '784 with the quad-photodetector disclosed by Lehureau '964. The rationale is as follows: One of ordinary skill in the art would have been motivated to provide a quad-photodetector in order to allow for calculation of a push-pull tracking error signal as well as a focusing error signal with the same detector ('964, par. 61).

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lehureau (US 4025784) in view of Tanaka et al (US 6608809) as applied to claims 1 and 2 above and further in view of Freeman (US 6901598).

Regarding claim 5, Lehureau fails to disclose wherein the optical disc is a non-removable disc. In the same field of endeavor, Freeman discloses wherein an optical disc used in a focus mechanism can be either removable or non-removable (col. 1 lines 26-32). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the device disclosed by Lehureau to use with a non-removable disc. The rationale is as follows: One of ordinary skill in the art would have been motivated to use a non-removable disc in order to prevent corruption or damage to a disc used for data storage.

Response to Arguments

Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tawfik Goma whose telephone number is (571) 272-4206. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tawfik Goma/
9/10/2007

/William Korzuch/
SPE, Art Unit 2627